

NEW RECORD OF THE PENAEID PRAWN *METAPENAEUS KUTCHENSIS* FROM BOMBAY WITH A REDESCRIPTION OF THE SPECIES

ABSTRACT

The penaeid prawn *Metapenaeus kutchensis* is a new record from Bombay. The earlier description by George, George and Rao (1963) was based on sub-adult specimens. Hence, a redescription of the species with a stress on variations in the details of thelycum and petasma is attempted here.

WHILE on a visit to Sassoon Dock at Bombay for routine collection on 17-12-1975, a penaeid prawn belonging to the genus *Metapenaeus*, quite similar to the commonly available species of *M. monoceros* and *M. affinis*, but distinct from both, was obtained. A research for the same subsequently revealed that it occurred in commercial abundance at Sassoon Dock and nearby landing centres.

Observations for the past few years have shown that this species appears first in November in sizeable quantity along with *M. monoceros* and *M. affinis*. The fishery extends upto April-May with the peak in January to April during which the catches sometimes comprise exclusively of this species. It is fished by trawl nets at a depth of 25 to 70 m.

A closer study of the specimens indicated that they resembled *Metapenaeus kutchensis* described from Gujarat by George, George and Rao (1963). But there were differences noticed in the thelycum and petasma of the present specimens. On detailed examination it was clear that these variations were due to the fact that the earlier description was based on only sub-adults. With the opportunity

to look at numerous adult specimens from Bombay fishery and the species being a new record from the area, a complete redescription of it, is attempted here. The present record with specimens collected from Veraval and other places extends the distribution of the species in the entire north west coast of India.

Description: Rostrum dorsally is armed with 7-9 teeth and an epigastric spine. It is slightly curved with an upturned tip and extends beyond the antennular peduncle in the case of female (Pl. I A) and slightly falling short of it in the case of male (Pl. I B). Adrostral carina ends behind the epigastric spine and the postrostral carina, a little in front of the posterior border of the carapace. Cervical groove meets the well developed orbito-antennal groove in front of the hepatic spine. Branchiocardiac groove is prominent and the pterygostomial margin is rounded.

Traces of carination in the first two abdominal terga get clearer in the third and sharpen in the last three segments. The carina on the last segment ends in an acute spine. Telson tapers into a sharp point and is shorter than the caudal swimmerets. It is grooved on the dorsal

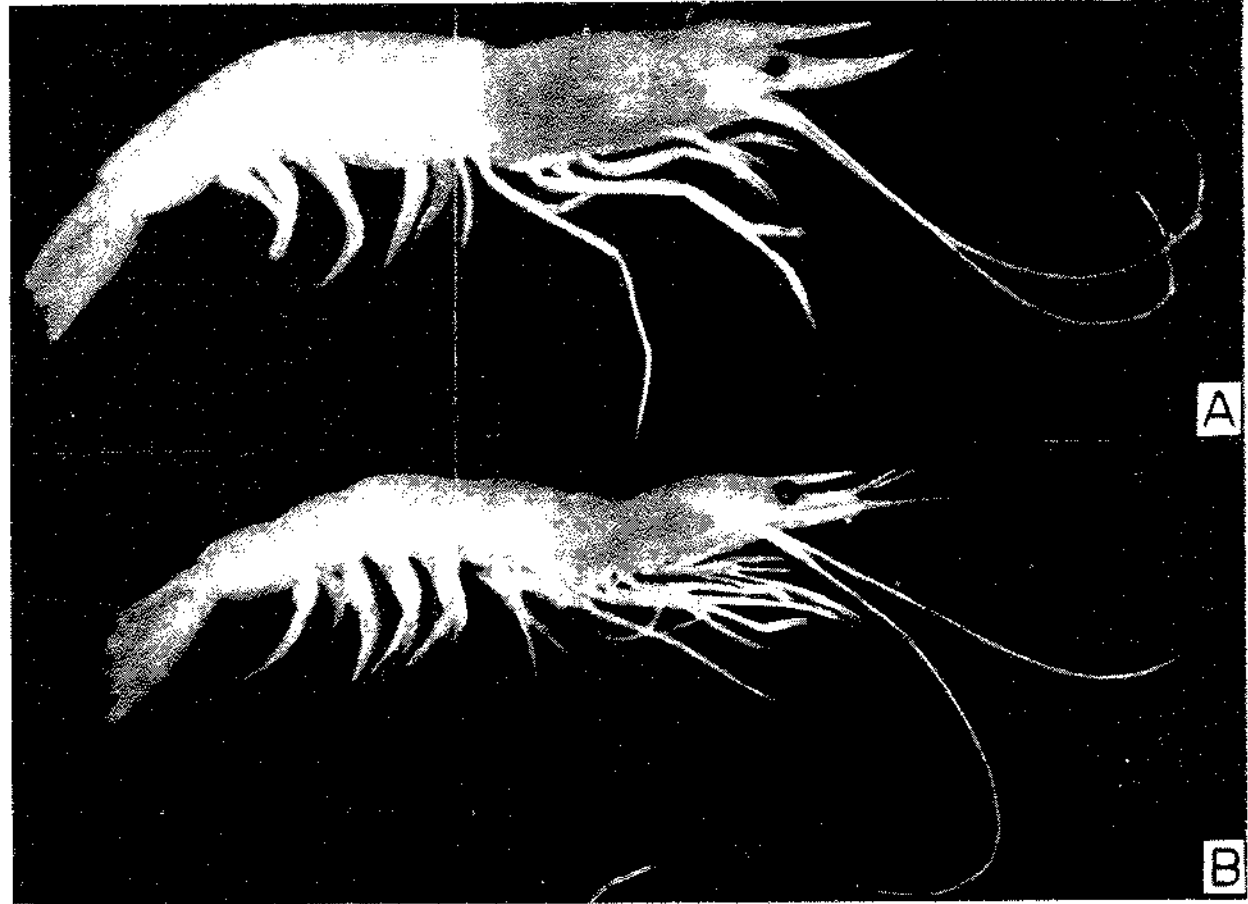


PLATE I. A. *Metapenaeus kitchensis* Female (x0.8) and B. Male (x0.8.)



PLATE II *Metapenaeus tuckeyi* — A. Meral spine of fifth pereopod (x 3.2), B. Thelycum (x 4.8) and C. Petasma (x 5)

side and bears very minute dorso-lateral spinules.

Antennular flagella are shorter than the peduncle and are nearly equal to each other in female and longer and subequal in male. The setose prosartema surpasses the eye and reaches the base of the peduncle. Antennal scale extends a little beyond the antennular peduncle.

The small ischial spine on the first pereopod is sometimes feebly developed. The short fifth pereopod, reaches the middle or extends further but never surpasses the antennal scale. It bears a notch and a tooth at the base of merus in adult male (Pl. II A) and looks stouter in the female.

The thelycum of the female (Pl. II B) shows an anterior median plate extending beyond and lying in level with the coxal projections. This plate is crown shaped and grooved ventrally. The slightly emarginate anterior end of it, is beset with tuft of setae. The two pairs of lateral plates behind the middle plate, show in the middle a wide depression into which project cluster of setae from the smaller and dorsally placed anterior of the two lateral plates. The posterior lateral plates are larger, rounded and swollen. The lateral plates merge with each other in the middle and thus form a thick, broad well defined border at the posterior margin.

The distomedian lobes of the petasma (Pl. II C) are bifid and transversely placed. The protuberances given off from the posterior border of the dorsal lobes leave a gap between them.

The colour of this species is reddish orange in the shade of carrot in fresh condition. It is more tomentose and less glabrous. The pubescence is present in shallow grooves and in irregular patches on the carapace and abdomen. The patches are thick on the epimera of the abdominal segments.

Discussion: George *et al.* (1963) described *M. kutchensis* from the Gulf of Kutch area. According to them the anterior median plate of the thelycum is convex and the plates glabrous. However, it is noticed here that the anterior median plate is crown shaped and the emarginate anterior and is beset with tuft of setae. Cluster of setae also project into a wide depression in the middle of the lateral plates. The distomedian lobes of petasma are distinctly bifid as against the indented border shown in their diagram.

The species resembles *M. monoceros* at first glance in the general appearance but differs widely in the shape of the thelycum and petasma. It shows affinity to *M. affinis* also in the type of petasma and the presence of a notch and a tooth at the base of the merus of fifth pereopod. However, there are striking differences between these two species. The fifth pereopod is shorter in *M. kutchensis*. The crown shaped median plate of the thelycum with emarginate anterior border and setae extends beyond the coxal projections of the fourth pereopod end remains in level with them. But this plate in *M. affinis* is tongue shaped with its anterior and hidden under the coxal projections of the fourth pereopod. The part of the thelycum comprising the lateral plates in *M. kutchensis* is more circular while the same in *M. affinis* is antero-posteriorly compressed and shallower. The distomedian lobes of the petasma are similar in both the species. But the protuberances projecting from the posterior border of the dorsal lobes are shorter and almost meet each other leaving a small circular hole in between in *M. affinis* while there is a gap between these protuberances in the present species. The space between the petasma and the sternum of the first abdominal segment is narrow in *M. affinis* and wider in *M. kutchensis*. *M. alcocki* (Georgé and Rao, 1966) is another species closely allied to *M. kutchensis*. But the convex anterior border of the median plate of the thelycum, the lateral bosses on either

side of the posterior extension of the median the petasma distinguishes the species from plate and the trilobed distomedian lobes of *M. kutchensis*.

*Central Marine Fisheries Research Institute,
Cochin 682 018.*

P. V. KAGWADE

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